Chemistry 30 A **Experiment 3**

Lab TA:_____ Name:_____

Directions: In the first box, include data for three colors of one manufacturer. In the second box, include data for the same three colors of a different manufacturer (written in the same order). Each food color will either remain as one spot or will separate into two different colors. If it remains as one spot, fill out the data for component 1 only.

Manufacturer:			
Colors of food coloring used:			
Component 1			
Color of spot			
Distance traveled by spot			
Distance traveled by solvent front			
R_f value			
Component 2 (if any)			
Color of spot			
Distance traveled by spot			
Distance traveled by solvent front			
R_f value			

Manufacturer:			
Colors of food coloring used:			
Component 1			
Color of spot			
Distance traveled by spot			
Distance traveled by solvent front			
R_f value			
Component 2 (if any)			
Color of spot			
Distance traveled by spot			
Distance traveled by solvent front			
R_f value			

Calculations and Questions

1. For each spot, measure the distance traveled by the spot and the distance traveled by the solvent front.

2. Calculate R_f values for each of the spots. Show your calculations for at least one of the spots here.

3. Which food colors consist of mixtures? Which are pure substances? Explain.

4. Compare the same colors of different manufacturers. Which ones appear to be the same? Which appear to be different? Explain.

Additional Questions:

1. Why use a pencil and not a pen to mark where to put the food coloring spots?

2. Why can't the chromatography paper touch the sides of the beaker?

Turn in your chromatography paper with this lab. If you are working with a partner, staple your labs together with the chromatography paper.